

## REMARKS

This Amendment is submitted in response to the Office Action mailed 19 November 2003. Reconsideration with an eye toward allowance is respectfully requested.

Applicant notes that this application was filed on 09 August 1999 and has been pending for more than 4 years. This Amendment is in response to the second examination on the merits of the claims. In the first examination, mailed 21 May 2003, the Examiner had indicated that Claims 6, 43, 57, and 58 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph and objections, set forth in the Office action and to include all of the limitations of the base claim and any intervening claims. In applicant's submitted Amendment, dated 19 August 2003, Applicant made the suggested modifications to Claims 6, 43, 57 and 58 to overcome the objections as to formal matters and matters under 35 U.S.C. 112, second paragraph. Applicant also cancelled other claims Applicant believed to be patentable, but not then identified as being allowable by the examiner to expeditious allowance of Claims 6, 43, 57 and 58, with the intention that the cancelled claims being pursued in a continuation or divisional application.

In the following, Applicant submits remarks, clarifications and in certain cases rebuttals to examiners Detailed Action Response to Arguments, mailed on 19 November 2003:

Applicant submits that with the amendments now presented that each of currently pending claims 6, 43, 57, and 58 are in an allowable form and therefore reconsideration with an eye toward early allowance is respectfully requested. Applicant has considered the Examiner's objections and does not fully understand the Examiner's use of the phrase "is not corrected" (or perhaps as a typographical error to "is not connected") in the 4<sup>th</sup> line of the item (2.) objection. Applicant interprets this objection to identify an antecedent basis issue where the terms used in this element of applicant's claim do not

follow from the earlier recited signals in the "means for cross correlation" element. Applicant has therefore amended the claim element to recite that it is the "... cross-correlated quadrature-phase signal is close to the maximum amplitude ...". Each of claims 6, 43, 57, and 58 have been amended and Applicant trusts that this amendment overcomes the objection to these claims where similar language has been put at issue.

Applicant respectfully submits that, contrary to the Examiner's assertion (in numbered Paragraph 4), the enablement requirement, under 35 U.S.C.112, first paragraph, is satisfied within the specifications of the current application Serial No. 09/370,362 and also in combination with the known state of the prior art, and more particularly in light of prior art Kato et al. (US 4,567,602). Furthermore, Applicant has read the content of the Application on page 62 and does not understand the purpose of this intended citation as the language at page 62 appears to support the language of the claim. In fact, in Examiner's Paragraph 7, Examiner states: "...*Kato et al. in the same field of endeavor, teaches the exact cross-correlation schedule as recited in claims (column 3 ,lines 34-columns 5, line 29 and claim1)*" and "...*Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to employ the cross-correlation schedule as taught by Kato et al. in the system of Feher...*". Applicant therefore submits that as this issued patent provides a teaching not only as to the schedule but to other aspects of generating and using signals of this type, the present claims are enabled by the specification as filed alone, or the specification in combination with the ordinary skill in the art as evidenced by the Kato et al. 4,567,602 patent. The Kato et al. 4,567,602 patent is listed at page 6 of the application as filed and each of the patents listed is incorporated by reference in the paragraph at page 67, lines 20-27 of the application as filed.

Applicant therefore briefly discusses the Kato et al. 4,567,602 patent which forms a part of the present application relative to the Examiner's 35 U.S.C. 101 based rejection. It is noted that for example Kato et al. (See Col.2, ln.44 to ln.55, and Col. 4, ln.44 to ln.67) discloses cross-correlation schedules, and in Col.5 ln. 44 to Col. 6 ln. 29 discloses

cross-correlation and does not place any particular restriction on the value A, thus A can be zero. Applicant does not understand the Examiner's rationale for stating that A cannot be zero as the Examiner has made no proof nor supplied any evidence to support Examiner's conclusion that the disclosed invention is inoperative or lacks utility. Absent a definitive evidentiary rebuttal with a statement of reason, applicant trusts that this rejection will be withdrawn.

Applicant further submits that the present specification (See for example page 25, line 12 to page 26, line 30) contains additional description for enablement and utility. In particular, page 26 (lines 21-28) includes a description of the S7(t) and S8(t) in-phase and quadrature-phase signal patterns shown in Fig. 5c. The disclosure of related in-phase and quadrature-phase eye diagrams (to in-phase and quadrature-phase signal patterns shown in Fig. 5c.), on page 42 lines 11-27, of Fig. 19A to Fig. 19E provides additional description in the specifications. Exemplary implementations of these in-phase channel and quadrature-phase channel signal patterns are also disclosed in page 26, line 31 to page 29, line 15, in Fig. 6A, and the description on numerous other pages and figures of the application as filed (see for example, the figures and corresponding descriptions for Fig. 7 (page 31 line 27 to page 33 line 3), Fig. 8 (page 33 line 4 to line 22), Fig. 9 (page 33 line 23 to page 34 line 11), Fig. 10a (page 34 line 15 to page 35 line 24), Fig. 12 (page 37 line 2 to page 38 line 4), Fig. 16 (page 40 line 22 to page 41 line 15), and Fig. 17 (page 41 line 16 to page 42 line 4)).

From the aforementioned figures and descriptions and the waveshapes and signal patterns of Fig. 5c, and eye diagrams of Fig. 19A, Fig. 19B and FIG. 19D it is evident that S7(t) and S8(t) represent in-phase and quadrature-phase signal patterns and related in-phase and quadrature-phase signal eye diagrams which are specified as "*when the in-phase channel signal is zero, the quadrature-phase channel signal is close to the maximum amplitude normalized to one*" and "*when the in-phase channel signal is non-zero, the maximum magnitude of the quadrature-phase channel signal is reduced from 1 (normalized) to A.*"

Applicant notes that these sections of the application as filed also support the operability and utility of the claimed invention, as these cited disclose implementations and embodiments of the waveforms, signals and related in-phase and quadrature-phase eye diagrams having signal characteristics which satisfy the claim requirement that *"when the quadrature-phase channel signal is non-zero, the in-phase signal is reduced from 1 (normalized) to A, where  $0 \leq A \leq 1$ "* including cases in which A is zero.

Additionally, examination of the in-phase and quadrature-phase signal eye diagrams, disclosed in Fig. 19A, Fig. 19B and Fig. 19D, illustrates Applicant's further disagreement with the rejections and objections made in the latest office action. Contrary to the Examiner's conclusion *"signal is reduced from 1 (normalized) to A, where  $0 \leq A \leq 1$ ". In this case, A cannot be zero"*; Applicant respectfully submits that in the aforementioned in-phase and quadrature-phase signal eye diagrams, the in-phase signal has a zero value (the in phase signal is reduced from 1 (normalized) to A, where  $A=0$ ). For at least this and the previously recited reasons, Applicant requests that the rejection under 35 U.S.C. 101 for inoperability and/or for lack of utility be withdrawn.

With reference to the rejection of the claims 6,43, 57, and 58 under 35 U.S.C. 103(a), Applicant respectfully disagrees at least for the reason that Feher US 6,198,777 is not a proper prior art reference.

The present application Serial No. 09/370,362 was filed on August 9, 1999 and claimed the benefit of priority to each of a corresponding U. S. Provisional Application No: 60/095,943 was Filed on August 10, 1998 and to U. S. Provisional Application No: 60/098,612 was Filed on August 31, 1998.

The Feher US 6,198,777 patent issued from application serial No. 09/385,693 which was filed on August 30, 1999 and which claimed priority to U.S. Provisional Application Serial No: 60/098,612, filed August 31, 1998. Co-pending U.S. Application Serial No. 09/370,362 was cited in Feher US 6,198,777.

Applicant further submits that the present application Serial No. 09/370,362 (as well as the corresponding Provisional Application No: 60/095,943) disclose the currently

claimed invention at earlier dates and in more detail than the cited Feher US 6,198,777 patent reference.

While there are many pages of the application which contain relevant description of the implementations, Applicant herein provides some additional examples of relevant descriptions from Application Serial No. 09/370,362: Page 18, line 18 -- page 21, line 1; page 21, line 23 -- page 26, line 30; page 27, line 24 -- page 28, line 21; and, page 31, line 27 -- page 33, line 3. Applicant has not repeated these sections here to minimize the verbosity of the response but wishes to bring them to the attention of the examiner.

In summary, the present application under examination has a priority and effective filing date approximately 3 weeks earlier than effective filing date of the patent application from which Feher US 6,198,777 patent issued. Furthermore, Provisional Application No. 60/095,943 filed on August 10, 1998 included disclosure of the invention covered in Claims 6, 43, 57 and 58 while Provisional Application No. 60/098,612 filed on Aug 31, 1998 did not. Thus, the invention covered in at least the now pending claims of the application being examined here was initially disclosed in the provisional application more than a year prior to the disclosure in the cited reference US 6,198,777.

Furthermore, Applicant submits that the invention covered in the present application was discovered prior to the invention which lead to the issuance of Feher US 6,198,777 patent. Stated in different terms, the invention represented by currently pending claims was invented prior to the invention covered by the claims of US 6,198,777.

Applicant trusts that with these remarks that Feher US 6,198,777 will be removed as a reference and the 35 U.S.C 103 rejection withdrawn. Kato US 4,567,602 does not itself disclose, teach, or suggest the claims presently pending and is not in itself a sufficient reference on which to predicate rejection.

Applicant requests the favor of a telephone call to the undersigned attorney should any remaining issues be identified that would prevent issuance of a Notice of Allowance.

The Commissioner is hereby authorized to charge any additional fees which may be required by this Amendment including fees for added claims not otherwise paid for, or to credit any overpayment, to Deposit Account No. 50-2319 (No.A-66732-3/RMA).

Signed this 16<sup>th</sup> day of January, 2004 , at Palo Alto, California.

RESPECTFULLY SUBMITTED,  
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Reg. No. 35,050  
Filed under Rule 1.34(a)

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